OPREP-3 NAVY BLUE SAMPLE REPORT

IMMEDIATE
FM COMMARCORLOGBASES ALBANY GA//G420//
TO CNO WASHINGTON DC//OP-45//
CMC WASHINGTON DC//SD//

INFO COMNAVSEASYSCOM WASHINGTON DC//07R//
NAVSEADET RASO YORKTOWN VA//00//

OPREP-3 NAVY BLUE/M38440/001 (SEE NOTE 1

1. INCIDENT. PROVIDE A BRIEF PHRASE OR SENTENCE DESCRIPTION OF THE TYPE OF INCIDENT.

2. CG'S ESTIMATE. THE COMMANDING GENERAL'S ESTIMATE OF THE SITUATION, THE IMPACT OF THE INCIDENT ON HIS COMMAND.

3. REFERENCE. THE DATE-TIME-GROUP (DTG) IN GREENWICH MEAN TIME (ZULU) OF THE PRECEDING VOICE OR MESSAGE REPORT. THE REFERENCE DTG IS NOT THE SAME AS THE INCIDENT DTG WHICH IS REPORTED SEPARATELY. INDICATE THE RECIPIENT OF A VOICE REPORT.

4. DETAILS

A. TIME. THE TIME OR APPROXIMATE TIME OF THE INCIDENT IN GREENWICH MEAN TIME (ZULU) ONLY.

B. LOCATION. MCLB ALBANY GA, BUILDING

C. NARRATIVE. PROVIDE A DESCRIPTION OF THE INCIDENT INCLUDING ALL KNOWN SIGNIFICANT DETAILS AND ACTIONS TAKEN IN RESPONSE TO THE INCIDENT. INCLUDE CAUSE OF INCIDENT.

5. LOSS/DAMAGE. PROVIDE AN ACCOUNT OF PERSONNEL OR EQUIPMENT LOSSES OR DAMAGES INCURRED AS A RESULT OF THE INCIDENT.

6. REMARKS. INCLUDE ANY COMMENTS THAT WOULD ENHANCE THE VALUE OF THE REPORT BUT WHICH DO NOT PROPERLY BELONG IN ANY OF THE OTHER PARAGRAPHS. INCLUDE ANY PRESS INTEREST OR RELEASES GENERATED FROM THE INCIDENT, IF APPROPRIATE, AND THE STATUS OF NIS NOTIFICATION/PARTICIPATION WHEN AN INCIDENT RESULTS IN NIS INVOLVEMENT. ALSO INCLUDE THE REASON FOR ANY DELAY BETWEEN THE INCIDENT TIME AND THE INITIAL VOICE OR MESSAGE REPORT WHICH EXCEEDS THE TIME FRAME PROVIDED BY THIS INSTRUCTION. ANY DELAY IN THE INITIAL REPORT IN ORDER TO OBTAIN ADDITIONAL INFORMATION IS UNACCEPTABLE.

7. END MESSAGE WITH ONE OF THE FOLLOWING TWO PHRASES, "AMPLIFYING INFO TO FOLLOW" OR "LAST OPREP-3 REPORT THIS INCIDENT."

NOTE 1. ALL OPREP-3 MESSAGE REPORTS, REGARDLESS OF TYPE PINNACLE OR NAVY BLUE) ARE SERIALIZED IN SEQUENCE BY INCIDENT BEGINNING WITH 001 ASSIGNED TO THE FIRST INCIDENT OF EACH CALENDAR YEAR. ADDITIONAL MESSAGE REPORTS CONCERNING THE SAME INCIDENT WILL BE ASSIGNED SEQUENTIAL LETTER SUFFIXES (I.E., 001A, 001B, 001C, ETC.). THE FIRST MESSAGE REPORT OF A NEW INCIDENT WILL BE SERIALIZED 002, WITH SUBSEQUENT MESSAGE REPORTS CONCERNING THIS INCIDENT ASSIGNED SUCCESSIVE SUFFIXES (I.E., 002A, 002B, 002C, ETC.).

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES

SAFETY EVALUATION OF DEVICE
(Amended)

NO: NR-155-D-118-S July 28, 1995

DEVICE TYPE: Chemical Agent Detector

MODEL: M43A1

MANUFACTURER: Department of the Army
Director, Arament and Chemical
Acquisition and Logistics Activity
ATTN: AMSTA-AC-SF
Rock Island, IL 61299-7630

DISTRIBUTOR: Any specific licensee of the NRC or an Agreement State that is under contract to the Department of the Army.

SEALED SOURCE MODEL: Amersham Corporation Foil Source Model AMM1001

ISOTOPE:
Americium-241

MAXIMUM ACTIVITY:
250 μCi (9.25 MBq)

LEAK TEST FREQUENCY: 12 months

PRINCIPAL USE: (P) Gas Detector

CUSTOM DEVICE: _____X_____ YES NO

Custom User: U.S. Department of Defense

DEVICE TYPE: Chemical Agent Detector

DESCRIPTION:

The Model M43A1 chemical agent detector is made up of three major components: (1) the electronics package, (2) the air pump assembly and (3) the detector cell assembly which contains the Americium source. These three components are secured in a high impact plastic case. The use of these components allows rapid non-technical repair of a unit in the field. The device also has an optional battery pack that can be secured to the bottom of the device or it can be powered by a 24-volt supply line. The device can be a portable unit or one that is mounted at a fixed location, depending on the situation. The unit has been constructed using materials that provide for its use in a wide range of environments.

LABELING:

The source housing is labeled with the trefoil symbol isotope, activity, date of assay, the words "Caution-Radioactive Material," and the words, "Radiation Exposure Can Occur When Cell Module Is Opened, Cell Module Should Not Be Disassembled." Additionally, the outside of the case is labeled with the isotope, activity, trefoil symbol, the words, "Caution Radioactive Material," the words, "Control Disposal Required," and the words, "If Found Return To Nearest Military Activity."

DIAGRAM: See Attachment 1

CONDITIONS OF NORMANL USE:

The device will be used in ambient environmental conditions throughout the world as an automatic chemical agent alarm.

DEVICE TYPE : Chemical Agent Detector

PROTOTYPE TESTING:

The foil source design used in the device has been deemed acceptable for licensing purposes by the NRC. The Radiochemical Center in England (Amersham) subjected the foil source to the following tests:

- Specified form per requirements of IAEA transportation.
- Isotope testing in accordance with 1968 requirements.
- Exposure to sulphur dioxide, ammonia, hydrogen sulfide hydrochloric acid, salt spray, and ozone.
- Immersion in simulated body fluid.
- Abrasion tests
- Elevated temperature tests up to 1200°C (2192.0 deg. F).
- Vibration tests
- Exposure to cleaning fluids, ethel, acetone trichloroethylene.

The manufacturer reported no leakage above 0.005 µCi (0.185 MBq) for any of the foil sources tested.

The entire device was subjected to environmental testing as required by Military Standard 810C. The device was subjected to tests that simulated the worst conditions that may arise during field use. Devices were smear tested after each test. No leakage in access of 0.005 µCi (0.185 MBq) was reported.

EXTERNAL RADIATION LEVELS:

The Department of the Army reports that:

- The maximum radiation dose rates from the detector is 0.6 mR/hr (6.0 µSv/hr) at the surface, 0.04 mR/hr (0.4 µSv/hr) at 6 inches (15.2 cm) and 0.005 mR/hr (0.05 µSv/hr) at 36 inches (91.2 cm).

  The maximum radiation dose rates from the cell module (source housing) are 1.4 mR/hr (14 µSv/hr) at the surface, 0.7 mR/hr (7 µSv/hr) at six (6) inches (15.2 cm) and 0.06 mr/hr (0.6 µSv/hr) at 36 inches (91.2).

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF DEVICE
(Amended)

NO: NR-155-D-118-S DATE: July 28, 1995 PAGE: 4 OF 5

DEVICE TYPE: Chemical Agent Detector

EXTERNAL RADIATION LEVELS: (Cent.)

These readings were taken directly in front of the foil face. In other directions the levels are insignificant.

QUALITY ASSURANCE AND CONTROL:

The devices are to be manufactured by a company under contract to the U.S. Department of the Army. The contract clearly specifies what are to be acceptable specifications of the device. Also, devices are periodically tested by the Army to ensure that they meet these specifications. Any device that does not meet the specifications is deemed not acceptable for use until the problem can be corrected by the manufacturer.

LIMITATIONS AND/OR OTHER CONSIDERATIONS OF USE:

The device shall be distributed by the U.S. Department of the Army, Director, Armament and Chemical Acquisition and Logistics Activity, ATTN: AMSTA-AC-SF, Rock Island, IL 61299-6730 for use by the Department of Defense anywhere deemed acceptable by the licensee.

Handling, storage, use, transfer, and disposal shall be determined by licensing authority.

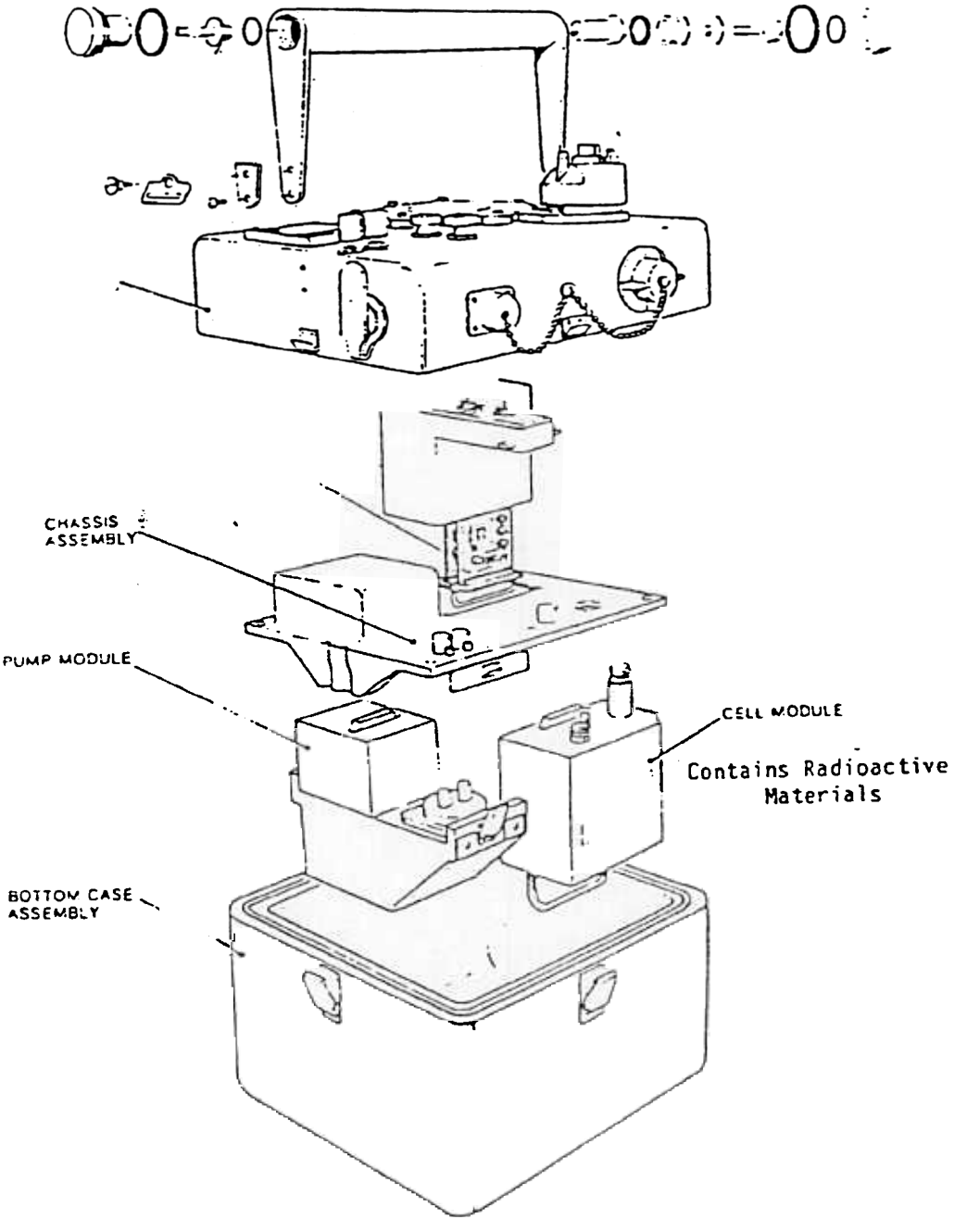
The areas where the cell modules are repaired or stored should be tested for removable contamination at a time interval to be determined by the Department of the Army, Radiation Safety staff.

This registration sheet and the information contained within the references shall not be changed without the written consent of the NRC.

The devices shall be leak tested at 12 month intervals using procedures as described in the licensees application dated March 29, 1982.

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF DEVICE
(Amended)

NO.: NR-155-D-118-S DATE: July 28, 1995 ATTACHMENT 1



REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF DEVICE
(Amended)

NO: NR-155-D-118-S DATE: JulY 28, 1995 PAGE: 5 OF 5

DEVICE TYPE: Chemical Agent Detector

SAFETY ANALYSIS SUMMARY

The Model M43A1 chemical agent detector has been designed to give fast, accurate readings of the concentration of specific gases and to warn of concentration that may be hazardous to the persons deployed in that area.

Based on our review of the information and test data cited in the references, and that the device will be used by persons trained in its use, we continue to conclude that the chemical agent detector design is acceptable for licensing purposes.

Furthermore, we continue to conclude that the devices would be expected to maintain their containment integrity of the source for the uses specified in this certificate.

REFERENCES:

The following supporting documents for the Model M43A1 chemical agent detector are hereby incorporated by reference and are made a part of this registry document:

- Department of the Army *letters* dated March 20, 1995, requesting changes to specific certificates, with enclosure thereto.

  U.s. Department of the Army, HQ, ARRCOM, Rock Island, IL, application dated March 29, 1982, with enclosures thereto and letter dated June 3, 1983.

ISSUING AGENCY:

U.S. Nuclear Regulatory Commission

Date: July 25, 1995 Reviewer: Thomas W. Rich
Thomas W. Rich

Date: July 25, 1995 Concurrence: Steven L. Baggett
Steven L. Baggett